

**FULL VERSION OF PENDING CLAIMS**

1       Claim 1 (currently amended): A negative ion emitting apparatus comprising:  
2                   a DC high-voltage power supply section;  
3                   at least one discharge electrode section connected to the DC high-voltage power  
4                   supply section for emitting negatively charged electrons, the discharge electrode section having a  
5                   proximal end and a distal end; and  
6                   at least one load resistance section arranged between said DC high-voltage power  
7                   supply section and said discharge electrode section so as to restrict flowing of electrons from  
8                   said DC high-voltage power supply section to said discharge electrode section until a  
9                   predetermined voltage is applied,  
10                  wherein the discharge electrode section is operatively connected at a proximal end  
11                  to a load resistance section so that current flows from the DC high-voltage power supply section  
12                  through the load resistance section to the proximal end of each discharge electrode section  
13                  causing negatively charged electrons to be emitted from a distal end of the discharge electrode  
14                  section.

C2/ 1       Claim 2 (original): A negative ion emitting apparatus as defined in claim 1, wherein said  
2                   DC high-voltage power supply section is connected to said load resistance section and discharge  
3                   electrode section through a high-voltage wiring.

C3/ 1       Claim 3 (currently amended): A negative ion emitting apparatus as defined in claim 1,  
2                  wherein said discharge electrode section is constituted by a needle electrode which is formed to

3     be pointed at a the distal end thereof with an acute angle to a longitudinal axis of the needle  
4     electrode.

1                 Claim 4 (previously amended): A negative ion emitting apparatus as defined in claim 2,  
2     wherein said discharge electrode section is constituted by a needle electrode.

1                 Claim 5 (original): A negative ion emitting apparatus as defined in claim 1, wherein the  
2     amount of negative ions emitted is varied by varying a load resistance of said load resistance  
3     section.

1                 Claim 6 (original): A negative ion emitting apparatus as defined in claim 2, wherein the  
2     amount of negative ions emitted is varied by varying a load resistance of said load resistance  
3     section.

1                 Claim 7 (original): A negative ion emitting apparatus as defined in claim 3, wherein the  
2     amount of negative ions emitted is varied by varying a load resistance of said load resistance  
3     section.

1                 Claim 8 (original): A negative ion emitting apparatus as defined in claim 4, wherein the  
2     amount of negative ions emitted is varied by varying a load resistance of said load resistance  
3     section.

1                 Claim 9 (original): A negative ion emitting apparatus as defined in claim 1, wherein a  
2     plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

*C4  
C5 X*  
1           Claim 10 (original): A negative ion emitting apparatus as defined in claim 2, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 11 (original): A negative ion emitting apparatus as defined in claim 3, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 12 (original): A negative ion emitting apparatus as defined in claim 4, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 13 (original): A negative ion emitting apparatus as defined in claim 5, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 14 (original): A negative ion emitting apparatus as defined in claim 6, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 15 (original): A negative ion emitting apparatus as defined in claim 7, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 16 (original): A negative ion emitting apparatus as defined in claim 8, wherein a  
2       plurality of said discharge electrode sections are arranged;

3           a distributor is arranged between said discharge electrode sections and said DC  
4       high-voltage power supply section and provided therein with an additional load resistance  
5       section; and

6           said DC high-voltage power supply section and said discharge electrode sections  
7       are connected to said distributor.

1           Claim 17 (currently amended): A negative ion emitting method comprising the  
2       step of connecting at least one load resistance section between a DC high-voltage power supply  
3       section and at least one discharge electrode section having a proximal end and a distal end, to  
4       thereby restrict flowing of electrons from said DC high-voltage power supply section to said  
5       discharge electrode section for enabling an emission of negative ions from said discharge  
6       electrode section, wherein said discharge electrode section is operatively connected at a proximal  
7       end to said load resistance section so that current flows from said DC high-voltage power supply  
8       section through said load resistance section to the proximal end of said discharge electrode  
9       section causing negatively charged electrons to be emitted from the distal end of said discharge  
10      electrode section.

*CS*  
*end*  
1       Claim 18 (previously amended): A negative ion emitting apparatus as in claim 3 wherein

2       the load resistance section includes carbon having a resistance of  $20 \Omega$  and the DC high-voltage

3       power supply section to provide 5kV.

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1       Claim 19 (previously added): A negative ion emitting apparatus as in Claim 9 wherein

2       the load resistance section is carbon in each of said discharge electrode sections and the

3       additional load resistance section in the distributor is carbon.

*C1*  
1       Claim 20 (previously amended): A negative ion emitting apparatus as in claim 19

2       wherein the respective carbon sections have a resistance of  $20 \Omega$  and the DC high-voltage power

3       supply section provides 5kV.

*CO*  
1       Claim 21 (currently amended): A negative ion emitting apparatus comprising:

2              a DC high-voltage power supply section;

3              a first needle point metal electrode; and

4              a first load resistance section including carbon of approximately  $20 \Omega$  connecting

5       the DC high-voltage power supply section to limit the first needle point metal electrode from

6       emitting negative ions until a predetermined voltage is applied by the DC high-voltage power

7       supply section, whereby at the predetermined voltage the negative ions are forcibly emitted in a

8       non-thermal manner.

1       Claim 22 (previously added): A negative ion emitting apparatus as in Claim 21 wherein

2       a second needle point metal electrode and a second load resistance section including carbon is

3       connected to the DC high-voltage power supply section and a common load resistance section is

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- 4 connected to the respective first and second load resistance sections in series with the DC high-
  - 5 voltage power supply section.
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